

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO

CLIFTON VERETTO,

Plaintiff,

vs.

Civil No. 99-0121 WWD/LCS

WILLIAMS FIELD SERVICE ROCKY
MOUNTAIN REGION COMPANY,

Defendant.

MEMORANDUM OPINION AND ORDER

THIS MATTER comes before the Court upon Defendant's Motion to Exclude Experts From Testifying as to Medical Causation, filed April 21, 2000 [**docket # 56**], following a hearing on the admissibility of this testimony on May 9, 2000.¹ Having reviewed the available deposition testimony, the parties' legal arguments and analysis presented at the hearing and in the briefs, and the applicable law, I find that Defendant's motion is well-taken and will be granted.

BACKGROUND

Plaintiff is an independent contractor who was performing welding services at Defendant's natural gas plant. He alleges that he was exposed to hazardous substances, including methyldiethanolamine ("MDEA") at the Milagro Plant which caused injury to his health and permanent physical deterioration. Plaintiff worked at the Milagro Plant from February 9, 1998

¹ Defendant submitted a "Document Index" which includes relevant portions from the depositions of Plaintiff's experts. Although counsel did not offer them for admission at the time of hearing, I am considering them as part of the record.

until March 10, 1998. It is undisputed that on February 24-25, the “Train 3 stripper tower”² was leaking a diluted MDEA mixture and misting a steam that contained unknown amounts of MDEA. While Plaintiff was welding in the late afternoon of March 7, 1998, he began to have shortness of breath and after repeated episodes, left to go home. The parties differ markedly on the facts concerning Plaintiff’s exposure to MDEA, including the length of exposure, temporal proximity of the exposure to Mr. Veretto’s first complaints on March 7th and exposure to other chemicals on site during the same period.

Plaintiff is proffering the testimony of three experts, Dr. Richard Brown, Dr. Richard Balkissoon, and Frank Stevens, Ph.D., an industrial hygienist, that Plaintiff’s injuries were caused by exposure to MDEA at Defendant’s Milagro Plant. Defendant contends that the testimony of these three experts is inadmissible under the standards enunciated by Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

DISCUSSION

In April, Plaintiff went to see Dr. Brown, his treating physician, complaining of shortness of breath. Dr. Brown diagnosed Mr. Veretto with an acute form of asthma and referred him to Dr. Ronald Balkissoon who diagnosed Plaintiff with reactive airway dysfunction syndrome (“RADS”). Dr. Frank K. Stevens, Ph.D. opined in his deposition that MDEA may have been an agent that caused or exacerbated Plaintiff’s respiratory condition. There is also evidence from a Dr. Pope, whose testimony is not at issue here, who diagnosed Plaintiff with “pneumonitis secondary to exposure to welding fumes with galvanized steel.” Deft’s Ex.A.

² According to defense counsel’s representations, MDEA functions as a catalyst in separating carbon dioxide from natural gas. This chemical reaction occurs in stripper towers.

The admissibility of expert testimony in federal courts is governed by Fed.R.Evid. 702, which superseded the Frye general acceptance test. Daubert, 509 U.S. at 587-88. Rule 702 provides that "[i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training or education, may testify thereto in the form of an opinion or otherwise." Under the Rules of Evidence, "the trial judge must ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable." Daubert, 509 U.S. at 589, 113 S.Ct. 2786. Under the recent Kumho Tire Co., Ltd. v. Carmichael, 119 S.Ct. 1167, 1175 (1999), the trial judge's role as a gatekeeper "applies not only to testimony based on 'scientific' knowledge, but also to testimony based on 'technical' and 'other specialized' knowledge." 119 S.Ct. at 1171. The parties do not dispute that the Daubert standard governs the admissibility of the proffered testimony in this case, but rather whether the proffered testimony comes within the flexible framework set out in Daubert to determine the reliability of expert evidence under Rule 702: (1) whether the theory or technique can be and has been tested; (2) whether the theory or technique has been subjected to peer review and publication; (3) the known or potential rate of error and the existence and maintenance of standards controlling the technique's operation; and (4) whether the theory or technique has been generally accepted within the scientific community.

In support of its position, Defendant relies on Mitchell v. Gencorp Inc., 165 F.3d 778 (10th Cir. 1999), which requires a plaintiff in a toxic tort case to demonstrate both "the levels of exposure that are hazardous to human beings generally as well as the plaintiff's actual level of exposure to the defendant's toxic substance" before he can recover. Id. at 781. The plaintiff in

Mitchell alleged that he developed chronic myelogenous leukemia as a result of exposure to benzene derivatives in a “flammable room” at the company where he was employed. The Tenth Circuit affirmed the district court’s exclusion of plaintiff’s expert witnesses as inadmissible under Daubert on the basis that no scientific methodology was used to determine the level of plaintiff’s exposure to benzene. In addition, even assuming exposure of a toxic level, the court found that there were insufficient peer-review articles to link that chemical with plaintiff’s particular type of leukemia.

Defendant contends that proffered expert testimony in the present case suffers from the same lack of scientific reliability with regard to causation of Mr. Veretto’s injuries. Having reviewed the available deposition testimony and the parties’ briefs, I conclude that testimony by Plaintiff’s experts that exposure to MDEA was the medical cause of Mr. Veretto’s respiratory condition does not meet standards for admissibility under Daubert and Tenth Circuit precedent.

Testimony of Frank Stevens, Ph.D.

Plaintiff’s industrial hygienist opines in his deposition that either MDEA or galvanized steel fumes may have caused or exacerbated Plaintiff’s respiratory condition. Deft’s Mem., Ex. B at 72-73. However, although Dr. Stevens concedes that the dosage is critical to determining whether a chemical agent causes toxic effects, he made no attempt to calculate or identify an exposure level, either generally or actually, as Mitchell requires in order for a toxic tort plaintiff to meet the indicia of scientific reliability under Daubert. See Doc.Index, Tab 13.³ In a toxic tort type case, quantitative determinations of dosage levels would seem to be an elusive goal, given

³ “Doc. Index” refers to the Document Index submitted by Defendant for the hearing.

the problems associated with involving humans in toxicological research. See Fed'l Judicial Ctr., Reference Man. on Scientific Evidence at 187 (1994). Plaintiff cites to a Fourth Circuit case, Westberry v. Gummi AB, which points out that such evidence “is not always available, or necessary” as a basis for an expert’s opinion. 178 F.3d 257, 264 (4th Cir. 1999). However, experts can still arrive at dosage calculations which satisfy admissibility requirements under Rule 702 and Daubert through case reports, experimental studies, and other types of experimental techniques. Reference Man. on Scientific Evidence at 187.

In this case, Dr. Stevens offered no such support for his testimony relating to causation of Plaintiff’s respiratory dysfunction. His testimony lacks a description of any method used to arrive at a level of MDEA exposure as well as scientific data supporting that determination.⁴ At the hearing, defense counsel represented that the Plant used dilutions of MDEA. Dr. Stevens made no site visits and constructed no models in an attempt to ascertain levels of MDEA which were leaking from the pipe of the stripper tower during the time Plaintiff alleged that he was exposed to a mist of MDEA. Although he stated that not all “aromatic amines” would cause RADS, Doc.Index at Tab 13, at 14:196, he conducted no literature search on MDEA,⁵ nor was he aware of any peer-review data that connected MDEA to asthma. Deft. Mem. Ex. B at 81; see Koch v.

⁴ Dr. Stevens opined that Plaintiff’s condition could have been caused by exposure to zinc oxide which is given off from cutting on galvanized steel (“galvanized steel fumes”), but offered no scientific basis for that connection either. Deft’s Resp., Ex. B at 73; Doc.Index, Tab 13 at 7:113 (“I do not know whether a hazardous atmosphere ever existed in the cooling bay when Mr. Veretto was cutting on the galvanized steel. We do not know directly; but we know indirectly that he became ill during that period of time”).

⁵ According to Defendant, such literature is available through the chemical manufacturer, Dow Chemical and indicates that exposure to MDEA caused only “transient minor skin irritation” and no signs of toxicity or mortality. See Doc.Index, Tab 12 (Ballantyne study).

Shell Oil Co., 49 F.Supp.2d 1262 (D.Kan. 1999) (expert's testimony regarding causation of plaintiff's immune system abnormalities held to be inadmissible where expert was unable to testify as to either level of exposure which would be hazardous to humans nor plaintiffs' actual levels of exposure); cmp., Curtis v. M&S Petroleum, 174 F.3d 661, 670 n.8 (5th Cir. 1999) (referring to studies regarding the hazardous effects of benzene and the exposure levels at which these effects occur).

Plaintiff's attempt to create a causal connection between his respiratory condition and MDEA on the basis of the Williams' material safety data sheet ("MSDS") falls short since the MSDS contains no guidelines regarding general toxic levels and Plaintiff's experts offer no information on any scientific basis used by Dow in generating the document. Cmp., Moore v. Ashland Chemical, Inc., 151 F.3d 269, 278 (5th Cir. 1998) (MSDS had "limited value" where expert-treating physician had no knowledge of what tests Dow conducted in generating MSDS); Savage v. Union Pacific R. Co., 67 F.Supp.2d 1021, 1035 (E.D.Ark. 1999). Plaintiff's use of the MSDS to establish causation amounts to deductive reasoning (MDEA is a respiratory tract irritant; RADS or asthma can be caused by respiratory irritants; therefore MDEA caused Plaintiff's respiratory condition), not reliable scientific validation required under Daubert.

In place of scientifically valid methodology, Dr. Stevens attempts to establish Mr. Veretto's level of exposure relying solely on Plaintiff's own statements,⁶ which are disputed through the testimony of other witnesses. Plaintiff alleges that he was getting soaked and had to change clothes several times during the day and that he was working in an amine-soaked area. See

⁶ In Mitchell, plaintiff's industrial hygienist based his opinion on several visits to the site as well as plaintiff's own statements. 165 F.3d at 781.

Pltff's Resp., Ex. D. These statements still beg the Daubert question of whether the subject of the expert's testimony, even having factored in Plaintiff's statements as part of the assessment, is based on scientific knowledge. Even where certainties are not possible, inferences or assertions also must be derived by the scientific method. See Daubert, 509 U.S. at 589-90.

Dr. Stevens himself characterizes his testimony as dealing with "interpretations of and opinions about compliance with OSHA regulations." Doc.Index, Tab 13 at 6:34. His testimony at trial will be limited to that subject, and he will not be allowed to testify that Plaintiff's exposure to MDEA or any other chemical compound was the cause of Plaintiff's respiratory condition.

Testimony of Dr. Balkissoon and Dr. Richard Brown

The conclusions made by Dr. Balkissoon and Dr. Brown that exposure to MDEA caused Plaintiff's respiratory condition may be valid for the purposes of treating Plaintiff's condition, but they do not meet the threshold admissibility standards under Daubert since Plaintiff cannot show that these specific conclusions are based on facts which are scientifically sound.

Dr. Balkissoon was aware of Plaintiff's history of asthma since childhood and that he had smoked a pack a day for 29 years. Doc.Index, Tab 14 at 37. He also stated that despite various etiologies for asthma, they all present similar clinical pictures and that Plaintiff's condition could have resulted from exposure at the workplace or allergies to common inhalants. Tab 14 at 5. He could not rule out that Mr. Veretto's condition resulted from an aggravation of preexisting asthma. Tab 14 at 104. Both doctors admitted that they had no way to quantify or evaluate the level of exposure to MDEA, Def't. Ex. D at 23, Tab 14 at 32, 36-37, although Dr. Balkissoon stated that the most important factor in determining RADS is the extent of exposure, Tab 14 at 36. He also stated that a diagnosis of RADS is dependent on a single, high level of exposure to a

precipitating chemical, Tab 14 at 36, yet both doctors based their diagnoses solely on Plaintiff's stated history and the MSDS. Tab 14 at 7, 22; Tab 15 at 33.

Neither physician had done any specific research or testing regarding MDEA, nor were they aware of any such literature or reported cases where MDEA caused RADS or other respiratory illness. Both Dr. Balkissoon and Dr. Brown were aware of reports that some amine compounds (e.g., diethanolamine) have caused respiratory illness, Tab 14, 58-62; Tab 15 at 16, 28, but they were unable to testify to the differences or similarities among the different amine compounds.⁷

The problem here is similar to that in Mitchell, where plaintiff's experts tried to "bridge the gap" between two types of leukemia. 165 F.3d at 782. Plaintiff's experts in this case assume there exists, without providing any scientific foundation for it, a bridge between different forms of a chemical compound. This kind of leap is not appropriate under Daubert; see Moore at 279 (noting that leaps from an "accepted scientific premise to an unsupported one" must be made with caution).

Differential Diagnosis

Plaintiff contends that the conclusions made by Dr. Balkissoon and Dr. Brown satisfy Daubert because they are based on the standard scientific technique of differential diagnosis, citing to Third and Fourth Circuit cases as support for this position. See Heller v. Shaw Ind., 167 F.3d 146, 149 (3rd Cir. 1999) and Westberry v. Gislaved Gummi AB, 178 F.3d 257, 262 (4th Cir. 1999). Differential diagnosis identifies the cause of a medical problem by eliminating the likely

⁷ In his deposition, Dr. Stevens stated that all amines are potent irritants, but agreed that they have very different properties as far as toxicity or as irritants. Deft's Mem., Ex. B at 77.

causes until the most probable one is isolated. Westberry, 178 F.3d at 262. Westberry notes that several other circuits have upheld the admission of an expert opinion on causation based upon a differential diagnosis under Daubert admissibility standards because it “consists of a testable hypothesis, has been peer reviewed, contains standards for controlling its operation, is generally accepted, and is used outside of the judicial context.” At 263.

Nevertheless, I find that both doctors’ causation testimony specific to MDEA’s role in Plaintiff’s condition is unacceptable under Daubert standards on the basis of differential diagnosis. The Tenth Circuit has not yet addressed the use of differential diagnosis as reliable scientific methodology in meeting those standards. Westberry mentions the Fifth Circuit case, Moore v. Ashland, which is instructive in that it is closely analogous to the facts in this case. 151 F.3d 269, cited in Mitchell at 781. Moore ignores the issue of whether the physician’s differential diagnosis satisfies Daubert’s reliability standards. Instead, it focuses on whether each of plaintiff’s experts’ testimony on causation related to plaintiff’s exposure to toluene was adequate under those standards.

The plaintiff in Moore was a truck driver who was exposed to chemicals including toluene when he identified a leaking drum on the back of his trailer and participated in the cleanup process. One expert, Dr. Jenkins, examined the Moore plaintiff several times, performed a series of tests and reviewed his medical records. In coming to his conclusion that plaintiff’s RADS had been caused by his exposure to vapors from the chemical spill, Dr. Jenkins relied on the defendant company’s MSDS which said that the contents of the drum were irritating to the lungs at some level of exposure, and the relatively short time (almost immediate) between exposure to the chemicals and the onset of plaintiff’s breathing difficulties. 151 F.3d at 272. The Fifth Circuit

affirmed the district court's exclusion of Dr. Jenkins' testimony on the basis that he had no scientific basis for his opinion, it was not sufficiently reliable under Rule 702, and thus would be "inconsistent with the court's gatekeeper role under Daubert to admit this opinion." At 273.

In the present case, Dr. Balkissoon and Dr. Brown based their conclusions regarding MDEA and Mr. Veretto's respiratory condition on the same factors relied on by Dr. Jenkins. Levels of general or actual exposure were unknown in both cases; in both cases, the experts were unable to scientifically assert similarities between the chemical compound plaintiff was exposed to and others which were scientifically linked to RADS. See 151 F.3d at 279.

Even a general policy of applying the indicia of reliability to a differential diagnosis cannot be embraced wholesale, particularly when the asserted cause of the plaintiff's condition involves specialized scientific knowledge. See, e.g., Bradley v. Brown, 42 F.3d 434, 438 (7th Cir.1994) (testimony of physician that multiple chemical sensitivity was the result of pesticide exposure properly excluded); Porter v. Whitehall Labs., Inc., 9 F.3d 607, 614 (7th Cir.1993) (treating physician's testimony that renal failure caused by ibuprofen was properly excluded); Black v. Food Lion, Inc., 171 F.3d 308 (5th Cir. 1999) (error to admit expert's opinion of causal link between slip-and-fall and contracting fibromyalgia since medical science does not know the exact process that results in affliction or factors that trigger the process). In other words, the process used in forming the differential diagnosis must itself be scientifically valid.

The proffered testimony of Dr. Balkissoon and Dr. Brown indicates a lack of scientific validity with respect to the connection between MDEA and Plaintiff's condition. Dr. Brown stated that he could not prove what Mr. Veretto was exposed to, and did not need to know. Pltff's Resp., Ex. B at 94. Both doctors were concerned more with treatment than with etiology,

or even with the accuracy of Plaintiff's reports of exposure. Doc.Index, Tab 15 at 4, 28. The connection between Plaintiff's physical condition and exposure to MDEA at the Milagro Plant does not rest on knowledge that is scientifically based. Accordingly, Dr. Balkissoon and Dr. Brown are precluded from giving testimony that an exposure to MDEA was the medical causation of Plaintiff's respiratory illness. They can, however, testify as to their examination of the Plaintiff, tests which were conducted and the diagnoses they reached, as these are all based on reliable methods. See Heller v. Shaw Ind., Inc., 167 F.3d 146, 159, n.8 (3rd Cir. 1999) (a treating physician whose methods and data are reliable, but whose causation conclusion is excluded as unreliable, may still have other reliable testimony to offer).

WHEREFORE,

IT IS ORDERED that Defendant's Motion to Exclude Experts From Testifying as to Medical Causation, [**docket # 56**] is hereby GRANTED in that Dr. Stevens will not be allowed to testify that Plaintiff's exposure to MDEA or any other chemical compound was the cause of Plaintiff's respiratory condition. Dr. Balkissoon and Dr. Brown are precluded from giving testimony that an exposure to MDEA was the medical causation of Plaintiff's respiratory illness. They can, however, testify as to their examination of the Plaintiff, tests which were conducted and the diagnoses they reached.


UNITED STATES MAGISTRATE JUDGE